

[54] RECTIFIER AND METHOD

[75] Inventors: William D. Wasmer, Fountain Hills;
Peter J. Gillespie; James G.
Lippmann, both of Mesa; Hiep M. Le,
Phoenix, all of Ariz.

[73] Assignee: Motorola Inc., Schaumburg, Ill.

[21] Appl. No.: 516,656

[22] Filed: Apr. 30, 1990

[51] Int. Cl.³ H01L 23/28; H01L 23/02;
H01L 23/12; H01L 23/42

[52] U.S. Cl. 357/72; 357/74;
357/76; 357/79

[58] Field of Search 357/68, 72, 77, 79,
357/76

[56] References Cited

U.S. PATENT DOCUMENTS

3,513,362 5/1970 Yamamoto 357/74
3,717,523 2/1973 Dunsche 156/69
3,743,896 7/1973 Weiske et al. 357/74

4,303,935 12/1981 Ragaly 357/76
4,314,271 2/1982 Heyke et al. 357/76
4,498,096 2/1985 Addie et al. 357/67
4,532,539 7/1985 Friszer 357/81

Primary Examiner—Rolf Hille

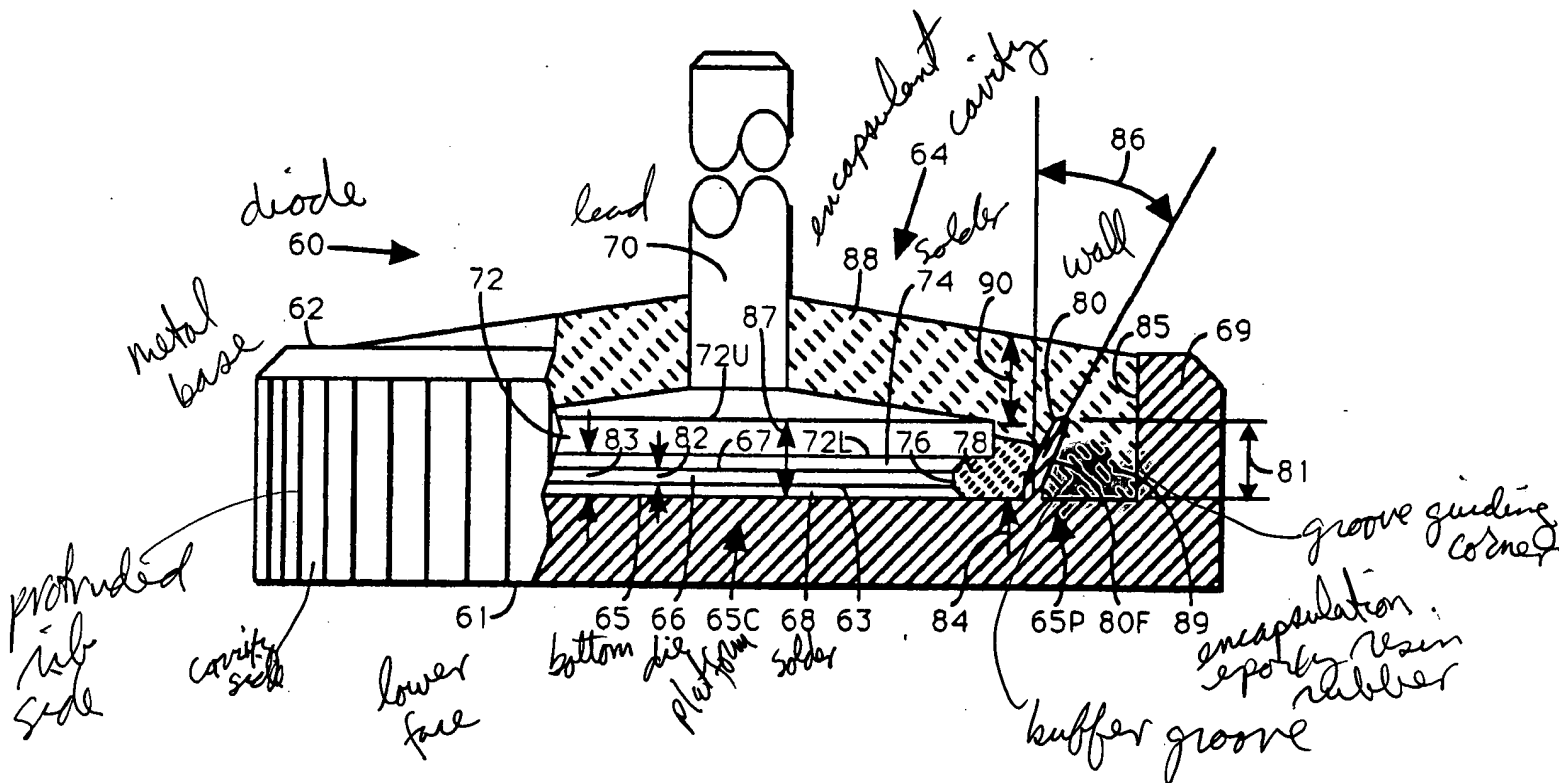
Assistant Examiner—D. Ostrowski

Attorney, Agent, or Firm—Robert M. Handy

[57] ABSTRACT

A rectifier (60) is formed by soldering a diode chip (66) in a cavity (64) in a metal base (62) having a metal side-wall (69), soldering the head (72) of an axial lead (70) to the chip (66), and filling the cavity (64) with an encapsulation (88). An outward leaning partition (80) is provided in the cavity (64) around and at about the same elevation as the chip (66). The encapsulation (88) covers the lead head (72) and the partition (80), and fills the space between the partition (80) and the base sidewall (69). This locks all the parts together, giving improved reliability and lead stiffness at low cost.

10 Claims, 2 Drawing Sheets



78 - silicone rubber, col. 5, L 26-27

